

APPENDIX SS7 (WIRELESS)

1. INTRODUCTION

- 1.1 This Appendix sets forth the terms and conditions for non-discriminatory access to the Common Channel Signaling/Signaling System 7 (CCS/SS7) signaling network provided by the applicable SBC Communications Inc. (SBC) owned Incumbent Local Exchange Carrier (ILEC) and Carrier. CCS/SS7 is comprised of Dedicated Signaling Links, Signaling Link Transport and Signaling Transfer Points (STP). In addition, this Appendix provides for CCS/SS7 functionality and translations to support SS7 based services and applications.
- 1.2 SBC Communications Inc. (SBC) means the holding company which owns the following ILECs: Illinois Bell Telephone Company, Indiana Bell Telephone Company Incorporated, Michigan Bell Telephone Company, Nevada Bell Telephone Company, The Ohio Bell Telephone Company, Pacific Bell Telephone Company, The Southern New England Telephone Company, Southwestern Bell Telephone Company, and/or Wisconsin Bell, Inc. d/b/a Ameritech Wisconsin.
- 1.3 As used herein, **SBC-13STATE** means the applicable above listed ILECs doing business in Arkansas, California, Connecticut, Illinois, Indiana, Kansas, Michigan, Missouri, Nevada, Ohio, Oklahoma, Texas, and Wisconsin.
- 1.4 As used herein, **SBC-12STATE** means the applicable above listed ILECs doing business in Arkansas, California, Illinois, Indiana, Kansas, Michigan, Missouri, Nevada, Ohio, Oklahoma, Texas, and Wisconsin.
- 1.5 As used herein, **SBC-7STATE** means the applicable above listed ILECs doing business in Arkansas, California, Kansas, Missouri, Nevada, Oklahoma, and Texas.
- 1.6 As used herein, **SBC-2STATE** means the applicable above listed ILECs doing business in California and Nevada.
- 1.7 As used herein, **SBC-SWBT** means the applicable above listed ILECs doing business in Arkansas, Kansas, Missouri, Oklahoma, and Texas.
- 1.8 As used herein, **SBC-AMERITECH** means the applicable above listed ILECs doing business in Illinois, Indiana, Michigan, Ohio, and Wisconsin.
- 1.9 As used herein, **PACIFIC** means the applicable above listed ILECs doing business in California.

2. SERVICE DESCRIPTION

2.1 SNET does not offer access to the SS7 signaling network under this agreement. Rather, SS7 is available as described in DPUC ordered CT Access Service Tariff Section 18.2.8. SS7 interconnection arrangements between SNET and Carrier will be on an individual case basis (ICB) due to the individual architectures of both Carrier and SNET signaling networks and unique requirements of the individual parties.

2.2 SS7 Transport

2.2.1 SS7 as defined in this Appendix, provides for the transporting of call setup (i.e. ISUP) signaling to each end-office subtended from the tandem in the LATA in which the interconnection occurs as outlined in this Agreement. SS7 Transport of SS7 Global Access or SS7 Access as defined in the SBC-12STATE below outlines the requirements for interLATA signaling.

2.2.2 SS7 Transport provides for the routing and screening of SS7 messages from an SBC-7STATE pair of STPs (i.e., a mated pair) to another SBC-7STATE pair of STPs. In the SBC-AMERITECH, due to the fact that state gateway STPs are not interconnected, SS7 Transport provides for the routing and screening of SS7 messages from a SBC-AMERITECH pair of designated Gateway STPs (i.e., a mated pair) to another SBC-AMERITECH pair of STPs within the same state only. The screening of messages provides for Carrier designation of signaling points associated with the Carrier and controls which messages may be allowed by the SBC-12STATE STP pairs. The routing of messages provides for the transfer of a complete message between signaling links, and for a Global Title Translation (GTT) of the message address, if needed.

2.2.3 SS7 Transport provides routing of messages for all parts of the SS7 protocol. These messages may support other applications and services such as, CLASS services, Message Waiting services, Toll Free Database services, Line Information Data Base (LIDB) Services, Calling Name (CNAM) Database services, Advanced Intelligent Network (AIN) services and Telecommunications Industry Association Interim Standard-41 (IS-41) services. SS7 Transport will route messages to the global title address or to the signaling point code address of the message based on the translation information of SBC-12STATE's STP.

2.3 Dedicated Signaling Links

2.3.1 Dedicated Signaling Links provide interconnection to SBC-12STATE's signaling network. Each signaling link is a set of dedicated 56Kbps (or higher

speed) transmission paths between Carrier STPs or switches and the **SBC-12STATE** STP mated pair. The Carrier designated Signaling Points of Interconnection (SPOI) are at **SBC-7STATE**'s STP, an **SBC-7STATE** serving wire center or are collocated in an **SBC-12STATE** wire center. In **SBC-AMERITECH** the SPOI is always collocated in the **SBC-AMERITECH** STP serving office. This means of collocation is required in **SBC-AMERITECH** for access to the **SBC-AMERITECH** STP. The links are fully dedicated to the use of Carrier and provide the screening and routing usage for the **SBC-12STATE** STP to which the link is connected. Dedicated Signaling Links are available to Carriers for their use in furnishing SS7-based services or applications to their end users or other users of SS7 signaling information.

2.4 Dedicated Signaling Links include the following elements:

2.4.1 SS7 Link Cross Connect

2.4.1.1 The SS7 Link Cross Connect provides a DS-0 or DS1 connection in the **SBC-12STATE** STP building and connects the STP Port Termination to the Carrier SPOI.

2.4.2 STP Port Termination

2.4.2.1 The STP Port Termination is the physical termination of the signaling link (i.e. 56 kbps circuit) at an **SBC-12STATE** STP. A STP Port Termination is used for each 56 kbps SS7 Link Cross-Connect terminated at an **SBC-12STATE** STP.

2.4.3 STP Access Link

2.4.3.1 The STP Access Link provides a 56-kilobit per second digital facility when Carrier requires an interoffice facility to connect from the Carrier SPOI to the STP building location.

2.5 The Carrier shall provide the portion of the signaling link from the Carrier premises within the LATA to the **SBC-12STATE** STP location or the Carrier SPOI. Carrier shall identify the DS1 or channel of a DS1 that will be used for the signaling link.

2.6 Carrier shall identify to **SBC-12STATE** the facility and channel to which the SS7 Link Cross Connect shall connect. If the facility does not terminate in the STP location **SBC-12STATE** shall provide a transport facility referred to as the STP Access Link. The STP Access Link will connect to the DS-0 cross connect at the STP location.

- 2.7 When Carrier uses an alternative DS1 facility or arranges, or agrees to allow, a physical degree of diversity or performance that is not in accordance with the specifications of Telcordia technical publication, GR-905-CORE, Carrier acknowledges that the performance and reliability of the SS7 protocol may be affected and the performance and reliability standards described in GR-905-CORE may be disqualified.
- 2.8 Dedicated Signaling Links are subject to **SBC-12STATE** compatibility testing and certification requirements pursuant to the Network Operations Forum Reference Document, GR-905-CORE and **SBC-12STATE** Technical Publication, TP76638. In the **SBC-AMERITECH** Technical Publication AM-TR-OAT-000069 will apply in addition to the documents referenced above. In **SBC-2STATE** PUB L-780023-**SBC-2STATE** may be substituted for TP76638 and first interconnections to **PACIFIC**'s signaling network per Carrier and per signaling point type of equipment will require completion of **PACIFIC**'s CCS/SS7 interconnection questionnaire. Each individual set of links from Carrier switch to **SBC-12STATE** STP will require a pre ordering meeting to exchange information and schedule testing for certification by **SBC-12STATE**.
- 2.9 Dedicated Signaling Links Technical Requirements
- 2.9.1 Dedicated Signaling Links will perform in the following two ways:
- 2.9.1.1 as an "A-link", which is a connection between a switch and a home signaling transfer point (STP) mated pair; and
- 2.9.1.2 as a "B-link" or "D-link," which is an interconnection between STPs in different signaling networks.
- 2.9.2 When Carrier provides its own switch or STP, Carrier will provide DS1 (1.544 Mbps) interfaces at the Carrier-designated SPOIs. DS1 transport to the SPOI can be provided for, as previously indicated, via existing transport facilities or through Carrier purchase of an **SBC-12STATE** dedicated transport facility, previously referred to as the "Access Connection". Each 56 Kbps transmission path will appear as a DS0 channel on the DS1 interface.
- 2.9.3 In each LATA in which Carrier desires Dedicated Signaling Links for interconnection to the **SBC-12STATE** SS7 Signaling Network, Carrier must purchase dedicated signaling links to each STP of a mated pair of STPs.
- 2.9.4 Carrier assumes the responsibility to ensure diverse routing of Carrier signaling links from Carrier switch to Carrier SPOI. **SBC-12STATE** will provide the

same amount of diversity as it provides to itself in terms of diverse routing of interoffice facilities, should such facilities be necessary.

- 2.9.5 When Carrier requests that **SBC-12STATE** add a Signaling Point Code (SPC), Carrier will identify to **SBC-STATE** the SPCs associated with the Carrier set of links.
- 2.9.6 Carrier will notify **SBC-12STATE** in writing thirty (30) Days in advance of any material change in Carrier's use of such SS7 signaling network, including but not limited to any change in Carrier SS7 Dedicated Signaling Links, SS7 Transport and/or STP.
- 2.10 **Signaling Transfer Points (STPs)**
 - 2.10.1 The STP element is a signaling network function that includes all of the capabilities provided by the STP switches which enable the exchange of SS7 messages between switching elements, database elements and signaling transfer point switches via associated signaling links. STP includes the associated link interfaces.
 - 2.10.2 The STP routes signaling traffic generated by action of Carrier to the destination defined by **the SBC-12STATE's** signaling network. Integrated services digital network user (ISUP) and Translational Capabilities Application Part (TCAP) signaling traffic addressed to SPs associated with Carrier set of links will be routed to Carrier.
 - 2.10.3 SS7 Transport will apply to SS7 messages transported on behalf of Carrier from an **SBC-12STATE** designated STP pair to a to an **SBC-12STATE** STP pair located in a different LATA. In **SBC-AMERITECH** this arrangement will only be provided for STPs located in the same state. In **SBC-7STATE**, the rate, per octet, will apply to octets comprising ISUP and TCAP messages. In **SBC-AMERITECH** the Signal Switching and Signal Transport rates will apply to ISUP and TCAP messages. In **SBC-2STATE**, SS7 transport is not available. However, transit signaling provides the ability for an interconnecting network (ICN) to pass signaling information through the **SBC-2STATE** network to a third party without requiring a trunking connection by a third party with **SBC-2STATE**.

2.11 STP Technical Requirements

2.11.1 STPs will provide signaling connectivity to the **SBC-12STATE** SS7 network.

2.11.2 The Parties will indicate to each other the signaling point codes and other screening parameters associated with each Link Set ordered by Carrier at the **SBC-12STATE** STPs, and where technically feasible, each Party will provision such link set in accordance with these parameters. Carrier may specify screening parameters so as to allow transient messages to cross the **SBC-12STATE** SS7 Network. The Parties will identify to each other the GTT type information for message routing. Carrier will pay a non-recurring charge when Carrier requests **SBC-12STATE** add GTT type information for message routing.

2.12 Interface Requirements

2.12.1 **SBC-12STATE** will provide STP interfaces to terminate A-links, B-links, and D-links.

2.12.2 Carrier will designate the SPOI for each link. Carrier will provide a DS1 or higher rate transport interface at each SPOI. **SBC-12STATE** will provide intraoffice diversity to the same extent it provides itself such diversity between the SPOIs and the **SBC-12STATE** STPs.

2.12.3 **SBC-12STATE** will provide intraoffice diversity to the same extent it provides itself such diversity between the SPOIs and the **SBC-SWBT** STPs.

3. MANNER OF PROVISIONING

3.1 The following describes the manner of provisioning for SS7 services. Each Party will work cooperatively with the other Party and will each provide knowledgeable personnel in order to provision, test and install SS7 Service in a timely fashion.

3.2 SS7 Transport

3.2.1 Carrier shall use SS7 Transport subject to the screening and routing information of the **SBC-12STATE** STPs. **SBC-12STATE** shall provide information to Carrier on the routes and signaling point codes served by the **SBC-12STATE** STPs. SS7 Transport shall route ISUP messages for the purpose of establishing trunk voice paths between switching machines.

- 3.2.2 SS7 Transport shall route TCAP queries, when feasible, pursuant to the SS7 Protocol to the SBC-12STATE “regional” STP pair that directly serves the database of the TCAP message. SS7 Transport shall route TCAP responses from an SBC-12STATE “regional” STP pair to another SBC-12STATE STP pair.
- 3.2.3 SS7 Transport provides a signaling route for messages only to signaling points to which SBC-12STATE has a route. SS7 Transport does not include the provision of a signaling route to every possible signaling point. When SBC-12STATE does establish a route to a signaling point in a mated pair of STPs, the route may not be available to other SBC-12STATE pairs of STPs, until ordered. When SBC-12STATE or Carrier, pursuant to a service order, arranges to establish a route to a signaling point, such route to the other signaling point or other signaling network will be used by all signaling points within, and connected to, the SBC-12STATE signaling network pursuant to the standard requirements of the SS7 protocol.
- 3.3 Disputes concerning the association of a signaling point among specific link sets associated with a SBC-12STATE mated STP will be resolved by consultation with the signaling point owner, as defined in the Local Exchange Routing Guide (LERG), Section 1, assignment of SPC.
- 3.4 Dedicated Signaling Links
- 3.4.1 Carrier shall designate the signaling points and signaling point codes associated with Carrier. Carrier shall provide such information to SBC-12STATE to allow SBC-12STATE to translate SBC-12STATE STPs. The information shall define the screening and routing information for the signaling point codes of Carrier and may include global title address, translation type and subsystem designations as needed.
- 3.4.2 Signaling links from SBC-12STATE mated pairs of STPs shall connect to Carrier premises within the same LATA. A set of links can be either:
- 3.4.2.1 "A" Link Sets from Carrier's Signaling Point (SP)/Service Switching Point (SSP). A minimum of two links will be required, one from the SP/SSP to each STP; or,
- 3.4.2.2 "B" Link Sets from Carrier's STPs that are connected to SBC-12STATE's mated pair of STPs. A minimum of four links will be required (i.e. a "quad") between the two pairs of STPs. (This same arrangement is sometimes referred to as a set of “D” links.)

- 3.4.3 A STP Port Termination and SS7 Link Cross Connect is required for each 56-kbps access link utilized for the Service. STP locations are set forth in the National Exchange Carrier Association, Inc. (NECA) Tariff FCC No. 4.
- 3.4.4 A pre-order meeting will define the **SBC-12STATE** facility availability and the degree of diversity in both the **SBC-12STATE** physical network and the Carrier physical network from signaling point to signaling point for the link.
- 3.4.5 When Carrier requires a STP Access Link, Carrier and **SBC-12STATE** shall jointly negotiate the degree of diversity provided among and between multiple dedicated signaling links. The negotiation shall consider the requirements of the SS7 standard protocol, the degree of diversity available in each network and the possible alternatives.
- 3.4.6 All applicable signaling point codes for each signaling link must be installed at each of **SBC-12STATE**'s interconnecting STPs.
- 3.4.7 Call set-up times may be adversely affected when Carrier, using SS7 signaling, employs Intermediate Access Tandems (IATs) in its network. **SBC-12STATE** makes no warranties with respect to call set-up times when multiple STP pairs are involved or when the signaling traffic is exchanged between two non-**SBC-12STATE** signaling points.
- 3.4.8 Provisioning of the SS7 Service is in accordance with **SBC-7STATE** TP76638 **SBC-AMERITECH** AM-TR-OAT-000069 and GR-905-CORE, as amended or **SBC-2STATE** PUB L780023-**SBC-2STATE**.

3.5 Use of the STP

- 3.5.1 When Carrier orders **SBC-12STATE** unbundled Local Switching, the use of the STP shall apply. No order or provisioning by Carrier is needed. The **SBC-12STATE** Local Switch will use the **SBC-12STATE** SS7 signaling network.

4. **RESPONSIBILITIES OF SBC-12STATE**

- 4.1 **SBC-12STATE** shall manage the network and, at its sole discretion, apply protective controls. Protective controls include actions taken to control or minimize the effect of network failures or occurrences, which include, but are not limited to, failure or overload of **SBC-12STATE** or Carrier facilities, natural disasters, mass calling or national security demands.

- 4.2 **SBC-12STATE** shall determine the GTT route for messages routed to GTT, which are associated with **SBC-12STATE** signaling points.
- 4.3 **SBC-12STATE** shall define regional functions and local functions of its STPs. **SBC-12STATE** will route ISUP messages within the **SBC-12STATE** signaling network, subject to technical feasibility. Capacity limitations shall define a temporary technical infeasibility until the capacity limit can be resolved.
- 4.4 **SBC-12STATE** shall route messages generated by the action of Carrier throughout the **SBC-12STATE** signaling network as specified within this Appendix. The content of the messages is for the use of signaling points of origination and destination. **SBC-12STATE** will not use any information within messages for any purpose not required by or related to the use of the **SBC-12STATE** signaling network. **SBC-12STATE** will not divulge any message or any part of messages generated by Carrier to any other party, except as required to manage the **SBC-12STATE** signaling network or as may be required by law.

5. RESPONSIBILITIES OF CARRIER

- 5.1 Carrier shall provision the signaling links at Carrier's premises and from Carrier's premises to **SBC-7STATE**'s STP location in a diverse, reliable and technically feasible manner. Carrier shall identify to **SBC-12STATE** the SPC(s) associated with the Carrier set of links.
- 5.2 Carrier shall identify to **SBC-12STATE** the GTT information for messages that route to Carrier.
- 5.3 When routing messages addressed to an **SBC-12STATE** Subsystem Number (SSN), Carrier shall use the **SBC-12STATE** defined SSN designation of the **SBC-12STATE** mated STP pair to which the message is routed.
- 5.4 Carrier shall transfer Calling Party Number Parameter information unchanged, including the "privacy indicator" information, when ISUP Initial Address Messages are interchanged with the **SBC-12STATE** signaling network.
- 5.5 Carrier shall furnish to **SBC-12STATE**, at the time the SS7 Service is ordered and annually thereafter, an updated three (3) year forecast of usage of the SS7 Signaling network. The forecast shall include total annual volume and busy hour busy month volume. **SBC-12STATE** shall utilize the forecast in its own efforts to project further facility requirements.

- 5.6 Carrier shall inform **SBC-12STATE** in writing thirty (30) Days in advance of any change in Carrier's use of such SS7 Service which alters by ten percent (10%) for any thirty (30) Day period the volume of signaling transactions by individual SS7 service that are planned by Carrier to be forwarded to **SBC-12STATE**'s network. Carrier shall provide in said notice the reason, by individual SS7 service, for the volume change.

6. DESCRIPTION OF RATE ELEMENTS **SBC-AMERITECH**

- 6.1 Pricing for SS7 is specified in Exhibit 1 to this Appendix.
- 6.2 There are three types of charges that apply for SS7 Access. They are recurring, usage and nonrecurring charges. Recurring and nonrecurring charges apply for each port that is established on a STP. Usage charges apply for each Initial Address Message (IAM) or TCAP (excluding LIDB Access Service, 800 Access Service TCAP messages and LNP Database Access Query TCAP messages) message that is switched by the local STP and transported to an **SBC-AMERITECH** end office or for each IAM and TCAP message that is switched by the local STP in a hubbing arrangement.
- 6.3 Nonrecurring charges apply for the establishment of Originating Point Codes (OPC) and Global Title Address (GTA) Translations. An OPC charge applies for each OPC established, as well as each OPC added or changed subsequent to the establishment of STP Access. The OPC charge applies on a per service basis. A GTA Translation charge applies for each service or application (excluding LIDB Access Service and 800 Carrier-ID-Only Service) that utilizes TCAP messages. A GTA Translation charge also applies for each service (excluding LIDB Access Service and 800 Carrier-ID-Only Service) added or changed subsequent to the initial establishment of STP Access.
- 6.4 Signal Formulation
- 6.4.1 An IAM Formulation usage charge will be assessed for each IAM message formulated at the **SBC-AMERITECH** tandem for Carrier to **SBC-AMERITECH** terminated calls. A TCAP Formulation usage charge will be assessed for each TCAP message formulated at the **SBC-AMERITECH** tandem for Carrier to **SBC-AMERITECH** terminated calls.
- 6.5 Signal Transport
- 6.5.1 An IAM Signal Transport usage charge will also be assessed for each IAM message that is transported from the local STP to the **SBC-AMERITECH** end office for terminating traffic. A TCAP Signal Transport usage charge will be assessed for each TCAP message that is transported from the local STP to

the **SBC-AMERITECH** end office (excluding LIDB and 800 Access Service).

6.6 Signal Switching

6.6.1 An IAM Signal Switching usage charge will be assessed for each IAM message that is switched by the local STP for each IAM message that is switched for direct routed terminating traffic. A TCAP Signal Switching usage charge will be assessed for each TCAP message that is switched by the local STP termination of non-call associated signaling messages (excluding LIDB and 800 Access Service).

6.7 Signal Tandem Switching

6.7.1 An IAM Signal Tandem Switching usage charge will be assessed for an IAM message that is switched by an **SBC-AMERITECH** STP and transported to an end office for tandem routed terminating traffic. When Signal Tandem Switching usage charges are assessed, Signal Switching and Signal Transport charges do not apply, except for SS7 Transport.

7. **DESCRIPTION OF RATE ELEMENTS SBC-7STATE**

7.1 Pricing for SS7 is specified in Exhibit 1 to this Appendix.

7.2 The following rate elements apply to **SBC-7STATE** SS7 Service:

7.3 SS7 Transport

7.3.1 SS7 Transport shall be measured per octet of information screened and routed.

7.3.2 Carrier shall pay the SS7 Transport Per Octet rate for the screening and routing of messages by each additional **SBC-SWBT** STP pair. The usage rate applies per octet generated by action of Carrier.

7.3.3 SS7 Transport is not available in the **SBC-2STATE**.

7.4 Dedicated Signaling Links

7.4.1 SS7 Link Cross Connect

7.4.1.1 Carrier shall pay the DS-0 or DS-1 rate for the SS7 Link Cross Connect at the STP location for each Dedicated Signaling Link. Rates

are per DS-0 and DS-1 bandwidth and per connection to Carrier. Rates are per month and nonrecurring installation per first or additional cross connects ordered and shall apply on a per order basis. This charge only applies in **SBC-SWBT**.

7.4.2 **STP Port Termination**

7.4.2.1 Carrier shall pay the STP Port Termination rate for each termination of the SS7 Link Cross Connect at the **SBC-7STATE** STP. One STP Port Termination must be installed at **SBC-7STATE**'s interconnecting STP for each Dedicated Signaling Link.

7.4.2.2 There are two charges that apply to the STP Port Termination, i.e., a fixed recurring monthly rate per port termination and a nonrecurring installation charge per port.

7.4.3 **STP Access Link**

7.4.3.1 Carrier shall pay the STP Access Link rate for each STP Access Link when the STP Access Link is provided. The charge includes a fixed rate per month plus a rate per mile per month and a nonrecurring installation charge per link.

7.5 **Signaling Point Code Addition**

7.5.1 Carrier shall pay the Signaling Point Code Addition rate for the establishment and translation of each applicable CCS network signaling point code at an **SBC-SWBT** STP. Carrier shall pay a nonrecurring charge per SPC established at each STP.

7.6 **Global Title Translation (GTT) Addition**

7.6.1 Carrier shall pay the GTT Addition rate for the establishment of Carrier's GTA, translation type or subsystem information in the **SBC-7STATE** STP translations. Carrier shall pay a nonrecurring charge per GTT established at each STP.

8. APPLICABILITY OF OTHER RATES, TERMS AND CONDITIONS

8.1 This Agreement (including all attachments hereto), and every interconnection, service and network element provided hereunder, is subject to all rates, terms and conditions contained in this Agreement (including all attachments hereto) that are legitimately related to such interconnection, service or network element; and all such rates, terms

and conditions are incorporated by reference herein and as part of every interconnection, service and network element provided hereunder. Without limiting the general applicability of the foregoing, the Terms and Termination provisions of this Agreement are specifically agreed by the Parties to be legitimately related to, and to be applicable to, each interconnection, service and network element provided hereunder.

EXHIBIT 1

SS7 PRICING

ARKANSAS PRICING – WIRELESS

SS7 TRANSPORT

This rate applies per Octet for the screening and routing of messages by each additional STP pair.

Rate per Octet	\$0.000005
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DEDICATED SIGNALING LINKS

- | | | |
|----|----------------------------|------------|
| 1. | SS7 LINK CROSS CONNECT | |
| | DS0 | |
| | Recurring Monthly | \$68.75 |
| | Non-Recurring Initial | \$286.20 |
| | Non-Recurring Additional | \$226.00 |
| | DS1 | |
| | Recurring Monthly | \$49.55 |
| | Non-Recurring Initial | \$254.95 |
| | Non-Recurring Additional | \$194.80 |
| 2. | STP PORT TERMINATION | |
| | Recurring Monthly | \$1,331.40 |
| | Non-Recurring Installation | \$433.20 |
| 3. | STP ACCESS LINK | |
| | 56 Kbps Access Link | |
| | Fixed | \$100.16 |
| | Per Mile | \$ 0.91 |

SIGNALING POINT CODE ADDITION	\$ 56.55
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GLOBAL TITLE TRANSLATION ADDITION	\$ 25.05
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EXHIBIT 1

KANSAS PRICING – WIRELESS

SS7 TRANSPORT

This rate applies per Octet for the screening and routing of messages by each additional STP pair.

Rate per Octet	\$0.0000002
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DEDICATED SIGNALING LINKS

- | | | |
|----|----------------------------|----------|
| 1. | SS7 LINK CROSS CONNECT | |
| | DS0 | |
| | Recurring Monthly | \$47.33 |
| | Non-Recurring Initial | \$100.52 |
| | Non-Recurring Additional | \$82.47 |
| | DS1 | |
| | Recurring Monthly | \$34.13 |
| | Non-Recurring Initial | \$90.52 |
| | Non-Recurring Additional | \$72.48 |
| 2. | STP PORT TERMINATION | |
| | Recurring Monthly | \$929.08 |
| | Non-Recurring Installation | \$162.27 |
| 3. | STP ACCESS LINK | |
| | 56 Kbps Access Link | |
| | Fixed | \$100.16 |
| | Per Mile | \$ 0.91 |

SIGNALING POINT CODE ADDITION	\$ 17.31
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GLOBAL TITLE TRANSLATION ADDITION	\$7.63
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EXHIBIT 1

MISSOURI PRICING – WIRELESS

SS7 TRANSPORT

This rate applies per Octet for the screening and routing of messages by each additional STP pair.

Rate per Octet	\$0.0000028
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DEDICATED SIGNALING LINKS

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|----|----------------------------|----------|
| 1. | SS7 LINK CROSS CONNECT | |
| | DS0 | |
| | Recurring Monthly | \$74.15 |
| | Non-Recurring Initial | \$299.30 |
| | Non-Recurring Additional | \$235.75 |
| | DS1 | |
| | Recurring Monthly | \$53.65 |
| | Non-Recurring Initial | \$266.70 |
| | Non-Recurring Additional | \$203.15 |
| 2. | STP PORT TERMINATION | |
| | Recurring Monthly | \$621.65 |
| | Non-Recurring Installation | \$455.65 |
| 3. | STP ACCESS LINK | |
| | 56 Kbps Access Link | |
| | Fixed | \$100.16 |
| | Per Mile | \$ 0.91 |

SIGNALING POINT CODE ADDITION	\$ 59.75
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GLOBAL TITLE TRANSLATION ADDITION	\$ 26.60
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EXHIBIT 1

OKLAHOMA PRICING – WIRELESS

SS7 TRANSPORT

This rate applies per Octet for the screening and routing of messages by each additional STP pair.

Rate per Octet	\$0.00000139
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DEDICATED SIGNALING LINKS

- | | | |
|----|----------------------------|----------|
| 1. | SS7 LINK CROSS CONNECT | |
| | DS0 | |
| | Recurring Monthly | \$55.70 |
| | Non-Recurring Initial | \$177.36 |
| | Non-Recurring Additional | \$155.28 |
| | DS1 | |
| | Recurring Monthly | \$40.26 |
| | Non-Recurring Initial | \$155.94 |
| | Non-Recurring Additional | \$133.87 |
| 2. | STP PORT TERMINATION | |
| | Recurring Monthly | \$572.32 |
| | Non-Recurring Installation | \$304.66 |
| 3. | STP ACCESS LINK | |
| | 56 Kbps Access Link | |
| | Fixed | \$100.16 |
| | Per Mile | \$ 0.91 |

SIGNALING POINT CODE ADDITION	\$ 40.33
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GLOBAL TITLE TRANSLATION ADDITION	ICB
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EXHIBIT 1

TEXAS PRICING – WIRELESS

SS7 TRANSPORT

This rate applies per Octet for the screening and routing of messages by each additional STP pair.

Rate per Octet	\$0.00000031
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DEDICATED SIGNALING LINKS

1.	SS7 LINK CROSS CONNECT	
	DS0	
	Recurring Monthly	\$42.58
	Non-Recurring Initial	\$67.24
	Non-Recurring Additional	\$64.55
	DS1	
	Recurring Monthly	\$30.89
	Non-Recurring Initial	\$75.12
	Non-Recurring Additional	\$72.46
2.	STP PORT TERMINATION	
	Recurring Monthly	\$365.36
	Non-Recurring Installation	\$50.26
3.	STP ACCESS LINK	
	56 Kbps Access Link	
	Fixed	\$100.16
	Per Mile	\$ 0.91

SIGNALING POINT CODE ADDITION	\$12.57
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GLOBAL TITLE TRANSLATION ADDITION	\$1.01
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EXHIBIT 1

CALIFORNIA PRICING – WIRELESS

DEDICATED SIGNALING LINKS

1. STP PORT TERMINATION

SS7 Link Cross Connect element is included as part of the STP Port rate element.

Recurring Monthly	\$1,325.00
Non-Recurring Service Order	
Connect	\$42.66
Disconnect	\$20.36
Change	\$20.36
Record	\$11.52
Non-Recurring Channel Connection	
Connect	\$125.42
Disconnect	\$44.47

2. STP ACCESS LINK

56 Kbps Access Link

Recurring Monthly	
Fixed	\$195.00
Per Mile	\$0.60
Non-Recurring Service Order	
Connect	\$35.68
Disconnect	\$21.94
Change	\$24.39
Record	\$19.94
Non-Recurring Channel Connection	
Connect	\$167.45
Disconnect	\$55.12

EXHIBIT 1

NEVADA PRICING – WIRELESS

DEDICATED SIGNALING LINKS

1. STP PORT TERMINATION

SS7 Link Cross Connect element is included as part of the STP Port rate element.

Recurring Monthly	\$2,249.00
Non Recurring	
Initial	\$319.80
Additional	\$148.35

2. STP ACCESS LINK
56 Kbps Access Link

Recurring Monthly	
Fixed	\$19.00
Per Mile	\$0.34107
Non-Recurring	
Initial	\$319.80
Additional	\$148.35

EXHIBIT 1

ILLINOIS PRICING – WIRELESS

STP PORT TERMINATION	
Recurring Monthly	\$263.19
Non-Recurring	\$714.11
ORIGINATING POINT CODE TRANSLATION	\$24.75
GLOBAL TITLE ADDRESS TRANSLATION	\$13.31
SIGNAL FORMULATION	
Per IAM Message	\$0.000451
Per TCAP Message	\$0.000324
SIGNAL TRANSPORT	
Per IAM Message	\$0.000084
Per TCAP Message	\$0.000057
SIGNAL SWITCHING	
Per IAM Message	\$0.000133
Per TCAP Message	\$0.000108
SIGNAL TANDEM SWITCHING	
Per IAM Message	\$0.000299

EXHIBIT 1

INDIANA PRICING – WIRELESS

STP PORT TERMINATION	
Recurring Monthly	\$288.78
Non-Recurring	\$617.01
ORIGINATING POINT CODE TRANSLATION	\$21.38
GLOBAL TITLE ADDRESS TRANSLATION	\$11.49
SIGNAL FORMULATION	
Per IAM Message	\$0.000124
Per TCAP Message	\$0.000284
SIGNAL TRANSPORT	
Per IAM Message	\$0.000085
Per TCAP Message	\$0.000057
SIGNAL SWITCHING	
Per IAM Message	\$0.000155
Per TCAP Message	\$0.000125
SIGNAL TANDEM SWITCHING	
Per IAM Message	\$0.000324

EXHIBIT 1

MICHIGAN PRICING – WIRELESS

STP PORT TERMINATION	
Recurring Monthly	\$270.11
Non-Recurring	\$254.79
ORIGINATING POINT CODE TRANSLATION	\$ 25.98
GLOBAL TITLE ADDRESS TRANSLATION	\$ 12.29
SIGNAL FORMULATION	
Per IAM Message	\$0.000229
Per TCAP Message	\$0.000118
SIGNAL TRANSPORT	
Per IAM Message	\$0.000051
Per TCAP Message	\$0.000034
SIGNAL SWITCHING	
Per IAM Message	\$0.000073
Per TCAP Message	\$0.000056
SIGNAL TANDEM SWITCHING	
Per IAM Message	\$0.000123

EXHIBIT 1

OHIO PRICING – WIRELESS

STP PORT TERMINATION	
Recurring Monthly	\$302.76
Non-Recurring	\$665.69
ORIGINATING POINT CODE TRANSLATION	\$ 24.21
GLOBAL TITLE ADDRESS TRANSLATION	\$ 13.03
SIGNAL FORMULATION	
Per IAM Message	\$0.000160
Per TCAP Message	\$0.000132
SIGNAL TRANSPORT	
Per IAM Message	\$0.000050
Per TCAP Message	\$0.000033
SIGNAL SWITCHING	
Per IAM Message	\$0.000135
Per TCAP Message	\$0.000120
SIGNAL TANDEM SWITCHING	
Per IAM Message	\$0.000233

EXHIBIT 1

WISCONSIN PRICING – WIRELESS

STP PORT TERMINATION	
Recurring Monthly	\$347.17
Non-Recurring	\$628.12
ORIGINATING POINT CODE TRANSLATION	\$ 22.94
GLOBAL TITLE ADDRESS TRANSLATION	\$ 12.33
SIGNAL FORMULATION	
Per IAM Message	\$0.000342
Per TCAP Message	\$0.000333
SIGNAL TRANSPORT	
Per IAM Message	\$0.000133
Per TCAP Message	\$0.000090
SIGNAL SWITCHING	
Per IAM Message	\$0.000184
Per TCAP Message	\$0.000152
SIGNAL TANDEM SWITCHING	
Per IAM Message	\$0.000458